

# OKEFENOKEE NATIONAL WILDLIFE REFUGE

## BIOLOGICAL REPORT

JANUARY - JUNE  
1966

### I. WILDLIFE POPULATIONS

Regular bi-weekly counts of waterfowl and wading birds were made on the prescribed inventory routes from Camp Cornelia boat dock to Buzzard Roost and Gannet Lakes and from the Jones Island boat dock to Big Water Lake through April 2, 1966.

Water levels in the swamp were above normal until early May and the weather was unusually cool during the spring season. Flowers and shrubs bloomed later than normal and some of the birds were noticeably later in starting nesting activities.

#### A. Wading Birds

Common Egrets. These birds were common throughout the winter and spring even though the weather was unusually cold and they are using the rookery near the old Gannet Lake boat trail again this year.

Snowy Egrets. These birds were gone by early fall of last year. The first observations this year were of two birds along the Pocket road on March 28. By May they were frequently seen along the refuge road sides and the swamp edge.

Cattle Egrets. The first observation of this species was of a single bird in the Pocket on March 28. They have since become numerous and are frequently seen in the swamp and in pastures adjacent to refuge lands. They are using the same rookery in Chesser Prairie that they used last year.

Great Blue Herons. These large birds are seen regularly but are well dispersed throughout the swamp as only a few are seen in any one area. At least three pairs nested successfully in Chesser Prairie. Their nests were constructed in tall dead cypress trees a few yards south of the egret rookery.

Little Blue Herons. Little blue herons were seen in greater numbers during this spring despite the cooler temperatures. Many immature birds were observed during the winter and spring months and some still wearing their white plumage were observed at the rookery in Chesser Prairie.

Green Herons. Green herons seen only occasionally during the first part of this period began arriving in increasing numbers through early May. They are now frequently seen over most of the accessible areas

and they are using the rookery in Chesser Prairie.

Louisiana Herons Two Louisiana herons were seen along the Suwannee Canal in early June. These herons were infrequent visitors to the refuge.

White Ibises. Considerable numbers of these birds stayed at the refuge during the winter. As many as 315 birds were counted in a single flock in January. Large numbers have been observed flying into a roost above the Suwannee River during May and June.

Wood Ibises. Two wood ibises were seen at the Suwannee River Sill on June 1. During 1965 wood ibises visited the refuge as early as March 22 and 210 were counted at Big Water on June 4 during a period of low water. Only two observations totalling three birds have been made this year.

Sandhill Cranes. The number of sandhill cranes seen on a regular waterfowl count was slightly higher than in 1965. The following counts were made in Chesser and Grand Prairies for the years 1960 through 1966.

	1960	1961	1962	1963	1964	1965	1966	1967
Early January	39	10	76	--	--	--	14	6
Late January	24	8	66	--	43	--	12	6
Early February	19	4	110	--	18	8	10	7
Late February	7	---	--	--	13	8	7	7
Early March	6	19	84	--	41	7	15	7
Late March	2	2	10	--	--	2	12	8
Early April	2	0	--	--	--	--	7	11
Late April	5	--	26	--	--	--	10	--

Miscellaneous Birds. Anhingas are seen frequently along the swamp watercourses and at least two pairs have been seen in the Chesser Prairie rookery. Two snow geese and one blue goose were seen in Chase Prairie on January 1 and four blue geese were seen in Chesser Prairie on March 15. One glossy ibis was seen on February 27 and 28 along the Pocket road. The first swallowtail kite was observed on Timber Compartment 12 on March 31 and several observations of at least four kites have been made. Three pairs of ospreys were nesting in Chesser Prairie on March 2. One nest was later abandoned. Black-crowned night herons were seen frequently until early spring. American bitterns were last seen on January 18 and a single least bittern was seen at the Chesser Prairie rookery on April 28.

#### B. Waterfowl.

Waterfowl populations during the late winter and early spring averaged 64% lower than during the same period in 1965. Some migratory ducks stayed until mid-March this year. By April 1 only nesting wood ducks and a few transient blue-winged teal remained at Okefenokee.

On March 28, Mr. Frank McGilvery, Wildlife Biologist, Patuxent Research Center, visited the refuge and inspected the wood duck nesting boxes. He concluded that the 85 boxes on the west side, which were

constructed from surplus ammunition boxes, were not suitable for nesting boxes and should be abandoned. None of these boxes had ever been used by nesting wood ducks. The boxes had no salvage value and were left for the squirrels, wrens and flycatchers.

Twenty-four new cypress boxes were constructed and erected in Mizell and Chesser Prairies during January. The total number available to wood ducks on the east side was 93 boxes. The boxes were first checked on April 6 and 5 boxes were being utilized. The boxes were checked again on June 28 and three additional boxes were being used. One new nest contained 10 eggs on June 28 and another new nest was empty. The 6 nests contained 53 eggs of which 45 had hatched and 8 remained in the nests. Therefore 85% of the eggs laid in these 6 nests hatched successfully. Several boxes were used by other swamp residents. Squirrels occupied 6 boxes, birds 6, screech owls 2, and pine snake 1.

Only five broods of wood ducks have been reported as of June 30 and averaged only 2.6 young per brood.

#### C. Turkeys.

Turkeys have been seen on two occasions near the refuge boundaries but none have been reported on refuge land during this period. The last observation of the turkeys transplanted from Cape Romain Refuge to Billy's Island was in February, 1965.

#### D. Bears.

Three bears have been seen during this period. One was seen below the Suwannee River Sill on April 21, one near Floyd's Island on June 18 and one in the Pocket on June 29.

Conflicts between bears and apiarists continue on lands adjacent to the refuge boundary. Reports have been received that bear were being trapped at an apiary near the refuge boundary in the Pocket and transported alive to another state to be sold. Two live bears were confiscated by Georgia Game Rangers from Mr. Mason Herrin, Manor, Georgia, who claimed they were destroying his bee colonies. It was later determined that the man did not own a single bee hive. It is believed that Mr. Herrin had trapped the bears with the intention of selling them. The bears were released on Waycross State Forest near our refuge boundary.

#### E. Deer.

Deer are seen frequently and deer sign is common on most upland areas adjacent to the swamp edge. Several fawns may be seen at Stephen Foster State Park on Jones Island. One adult male was killed by an automobile on the Pocket road on May 10. Seven deer were seen on Billy's Island on June 17.

#### F. Raccoons.

Raccoons are numerous and raccoon sign is abundant almost everywhere. They can be seen almost any day or night along the Pocket road and are sometimes a nuisance at Stephen Foster State Park.

#### G. Otters.

Three more otters were shipped to Wheeler Refuge during January and February of this period. The total transplant now stands at 7 males, 4 females and one unknown.

Otters were seen more frequently this period and one friendly individual stayed near Camp Cornelia boat dock for several days.

#### H. Fishing.

Fishing was fair to good during most of this period and excellent during May when the water level dropped. Greel limits of pan fish and chain pickerel were reported. One largemouth bass taken at Camp Cornelia weighed 11 lbs. 4 oz.

The borrow pits along the Pocket road were fertilized during this period and were to be opened to the general public at the end of this period.

#### I. Alligators.

Alligators are numerous on the refuge and may be seen in considerable numbers on warm days. Alligator poachers continue to be a problem at Okefenokee. Most of the poaching was at the Suwannee River Sill and in Territory Prairie. Three violators were apprehended during this period. Almost constant patrolling is necessary during the warmer months to prevent wholesale depredations by poachers.

#### J. Miscellaneous.

Assistant Manager Edward Collinsworth reported a mink in the Suwannee Canal on February 3. Wildlife Biologist Leonard Walker saw a rabbit along the edge of the Suwannee Canal approximately two miles west of the Camp Cornelia boat dock on May 6.

#### K. Nest Predation Study.

Three dummy nest transects were established on Okefenokee Refuge during this period. The transects were located in Chesser Prairie, the Pocket and on Cowhouse Island. They were established on March 2, 3 and 4, respectively.

The eggs of the Chesser Prairie transect were placed along the spoil bank of the Suwannee Canal and on "batteries" and mats of maidencane and

were approximately parallel to a line of wood duck nesting boxes.

The Pocket transect was established near the swamp line with approximately one-half on burned over timber land and the remainder on a two-year old pine plantation. This transect is near a line of wood duck nesting boxes that are located out in the swamp. The transect is on upland that is considered to be poor to fair turkey habitat.

The Cowhouse Island transect is on upland timber land in a two-year rough that is considered to be poor to fair turkey habitat.

The Pocket, Cowhouse Island and Chesser Prairie transects were checked on April 12, 18 and 21, respectively, with results as follows:

	<u>Eggs intact</u>	<u>Raccoon</u>	<u>Skunk</u>	<u>Crow</u>	<u>Unknown</u>	<u>Total</u>
Chesser Prairie	6	2	--	--	46	54
Pocket	3	4	16	1	30	54
Cowhouse Island	-	34	6	--	14	54
Totals	9	40	22	1	90	162
% of total	5.55	24.69	13.58	0.62	55.55	99.999

A rise in the water level after the transects were established was probably responsible for the fate of a major portion of the 46 eggs listed under unknown for the Chesser Prairie transects.

No trace was found of the 30 and 14 eggs listed under unknown for the Pocket and Cowhouse Island transects, however, it is believed that most if not all of these 44 eggs were taken by predators. Predators accounted for at least 38% of the eggs and the actual loss to predation was probably considerably greater.

## II. WEED CONTROL.

The new growth of maidencane (*Panicum hemitomum*) along the brushy edges of the Suwannee Canal was sprayed on May 4, 5, 18, 19, 23 and 31, and June 1 and 2. Although spraying was hampered by bad weather and equipment breakdowns the results were excellent. It is estimated that better than 95% of the maidencane was killed on the approximately 11 acres of canal margin.

Approximately one acre of aquatic spikerush (*Eleocharis baldwinii*) was treated on May 18 with Ortho diquat in the boat trail at Billy's Island. Good results were obtained even though a strong current swept the chemical downstream too fast for optimum results.

On June 3 and 7 mats of maidencane in the Suwannee River Sill borrow pit totalling approximately 3.5 acres were sprayed with downon with excellent results. Maidencane has spread rapidly in the borrow pit and should be checked annually to prevent its encroachment on this open water area.

Water willow (*Decadon verticillatus*) along the boat run between

Billy's Lake and the Suwannee Canal was sprayed with a mixture of 2-4,D and 2-4-5,T on June 8, 14, 16, 17 and 18. This work was hampered by bad weather which included a hurricane, and equipment failure. Results of the spraying was excellent, however several mats of maidencane still interfere with boat travel and should be sprayed with dowpon. Dowpon is an effective herbicide for water willow and maidencane and possibly future spraying along this boat run should be done with this chemical rather than 2-4,D and 2-4-5,T.

### III. ECOLOGICAL SUCCESSION FOLLOWING FLOODING BY THE SUWANNEE RIVER SILL

The marked tree transect is to be checked during late summer of 1966. The Mack's Island and Pocket transects are to be checked during late summer of 1966 or 1967.

### IV. PLANT SUCCESSION ON PRAIRIE BATTERIES.

The Chesser Prairie and Sapling Prairie Batteries are to be checked on alternate years. The next check will be during the late summer of 1967.

### V. ECOLOGICAL SUCCESSION FOLLOWING THE 1954-1955 FIRES

The Suwannee Canal and the Soldier Camp Island Burn Plots were checked in 1965 and are due again in 1968. The Billy's Lake Burn Plot is to be checked in late summer of 1966 or 1967.

### VI. SPECIAL ASSIGNMENT.

An assignment was received during November, 1965 on the Pesticides Monitoring Program. This program is being conducted concurrently with the annual Waterfowl Wing Survey. A random sample of mallard and black duck wings from the Atlantic Flyway and mallard wings only from each of the other flyways was selected for analysis for pesticide residues. Four weeks were devoted to this program during January, February and March of this period.

### VII. PUBLIC RELATIONS.

A Christmas Bird Count was conducted on January 1. The results were reported in the Refuge Narrative Report for 1965.

Color slides of the Refuge and its wildlife was shown to a cub Scout Troop at Alice Street School on February 2.

On March 5 a group of 15 Georgia State College students were given a tour of the east side and a talk on the ecology of the Okefenokee Swamp illustrated with color slides.

A news article was prepared for the Waycross Journal-Herald relative to National Wildlife Week on March 22.

A talk on conservation illustrated with color slides was presented to 90 Vocational Agriculture students at Ware County High School on March 25.

Dr. John Phillips and Mr. Roy Kalmarck, wildlife biologist and forester, respectively, were given a tour of the east side of the refuge on March 29.

On April 13 Professor E. W. Mogren and 21 forestry students from Colorado State University were given a tour of the west side of the refuge.

On April 14, Mr. Lewis Dietz, a writer for "Field and Stream" magazine was given a tour of the east side of the refuge. The origin and ecology of the swamp was explained to Mr. Dietz who was writing a story about the swamp.

On April 26 Mr. John Ahlhauser, Milwaukee Journal, was given a tour of the east side of the refuge to obtain photographs for a story.

On April 26 Mr. Don Pfitzer, Conservation Education Coordinator, was given assistance in making sound recordings and photographs on the east side of the refuge.

On May 3 Mr. George Rhule, National Park Service, was given a tour of the east side prairies.

On May 6, 7, 9, 11, 12 and 13 Mr. Robert Sisson, Staff Photographer, National Geographic Magazine, was assisted in obtaining photographs for their forthcoming issue on National Wildlife Refuges.

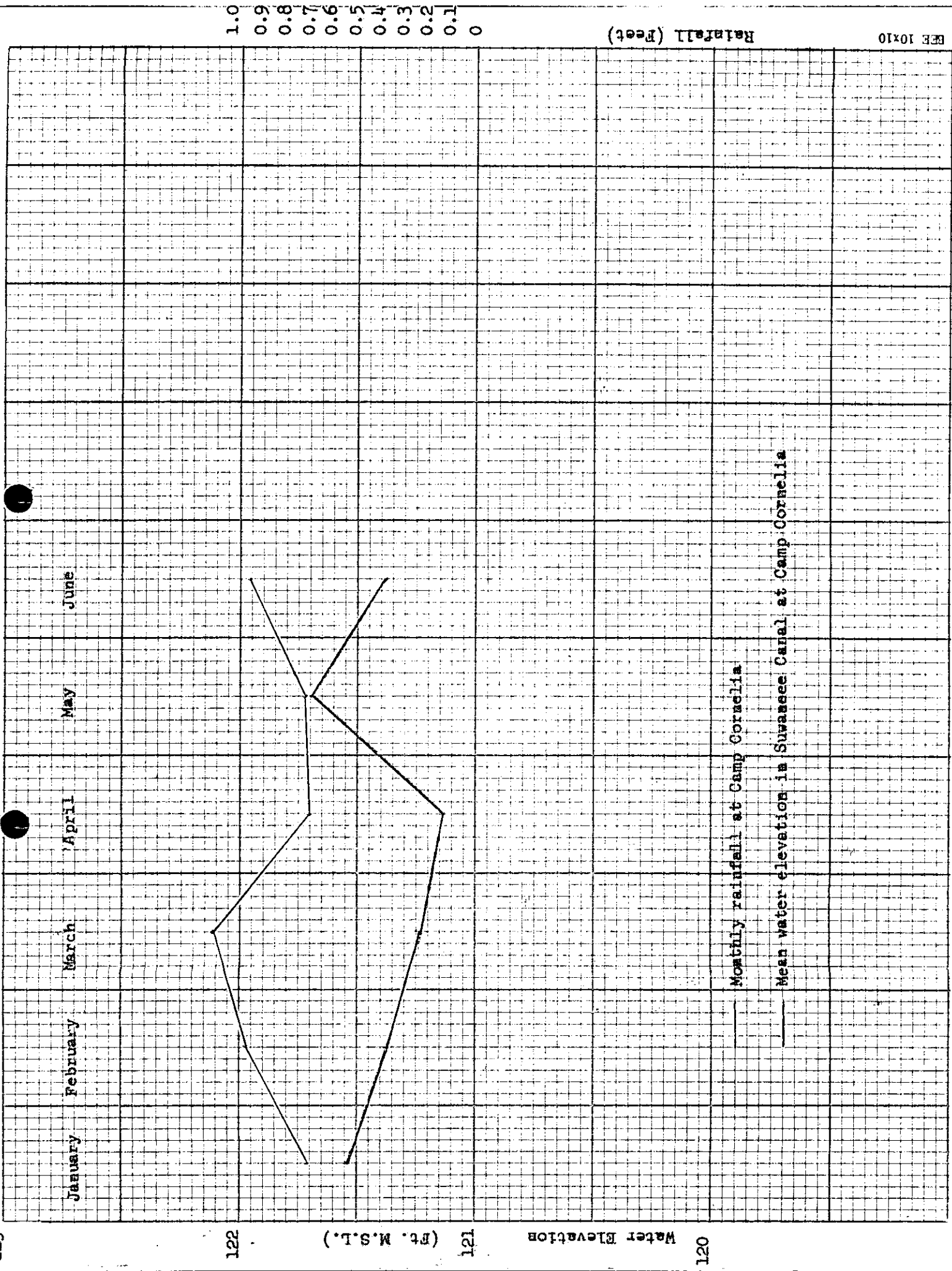
On May 7, a group of 24 from Augusta State College was given a tour of the east side prairies and the origin and ecology of the swamp were explained to the group.

On June 16 and 17 Dr. Leon Zalkow, Professor of Chemistry, Georgia Tech, was assisted in collecting plants reported to have medicinal value. Dr. Zalkow is extracting identifiable compounds from the plants to determine whether they have true medicinal value or not.

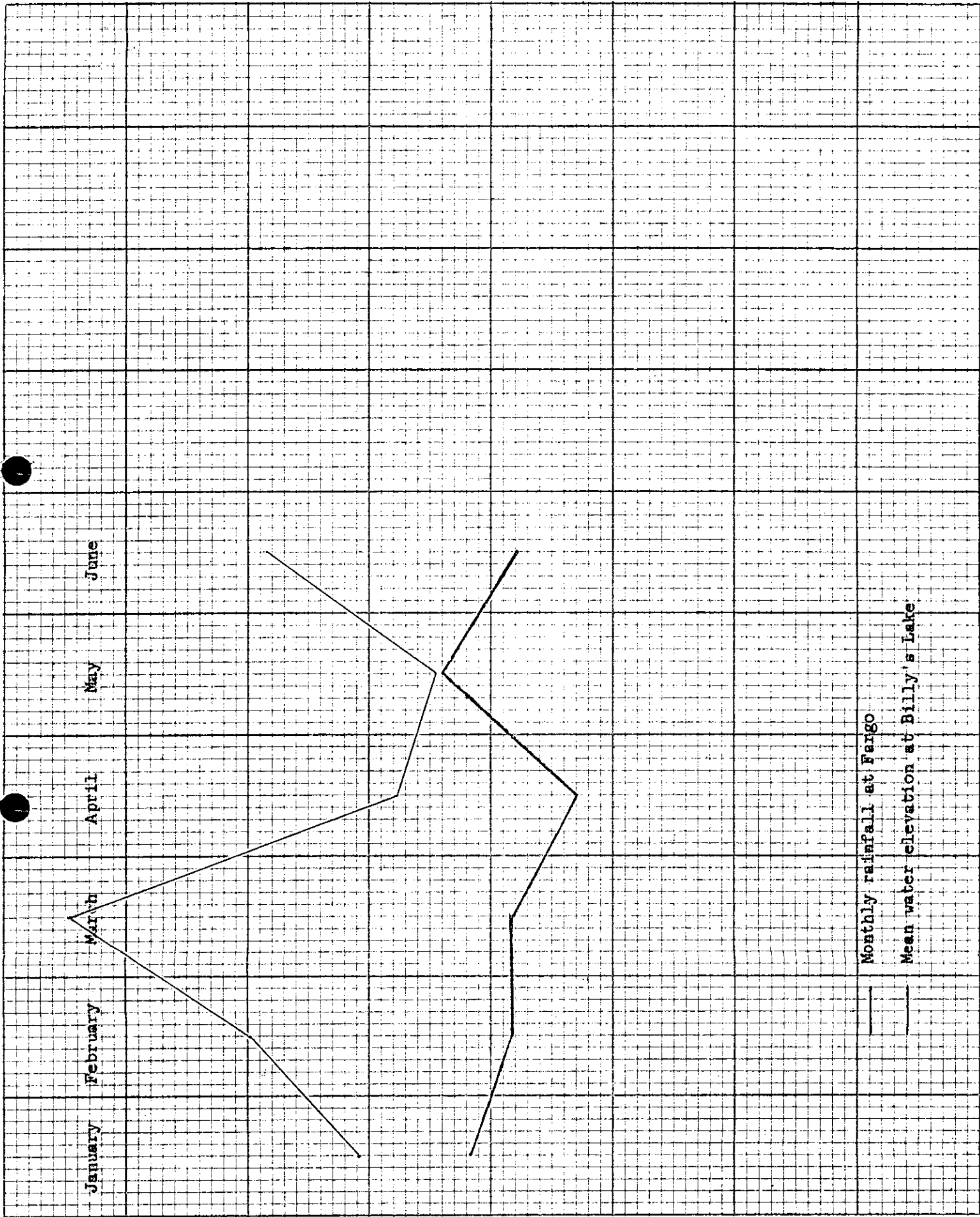
On June 17 a group of 9 from Principia College, Elmhurst, Illinois, were shown color slides relative to the origin and ecology of the Okefenokee Swamp.

August 4, 1966

*Leonard O. Walker*  
Leonard O. Walker  
Wildlife Biologist







— Monthly rainfall at Fargo  
- - - Mean water elevation at Billy's Lake

Water Elevation

(Ft. M.S.L.)